



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

H.A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,264	07/31/2003	Michael K. T. Lee	112-0127US	3390
29855 7590 02/05/2007 WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI, L.L.P. 20333 SH 249 SUITE 600 HOUSTON, TX 77070			EXAMINER TRAN, MICHAEL THANH	
			ART UNIT	PAPER NUMBER
			2827	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/05/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/633,264

Applicant(s)

LEE ET AL.

Examiner

MICHAEL T. TRAN

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-16 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 10 and 17-20 is/are allowed.
- 6) ☒ Claim(s) 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_



MICHAEL TRAN  
PRIMARY EXAMINER

### DETAILED ACTION

1. In response to the Communications dated November 28, 2006, claims 1-20 are active in this application.
2. Claims 11-16 are withdrawn from further consideration by the Examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected invention.
3. Applicant is reminded that upon the **cancellation** of claims to a **non-elected invention**, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

### ***Claim Rejections - 35 U.S.C. § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable

over Chang et al. [U.S. Patent # 6,514,781] in view of Chen et al. [U.S. Patent # 6,473,361].

Chang et al. disclose a method of supplying power to a memory device comprising: providing a charge-storing device [300]; connecting the input of a DC-to-DC converter [330] to the charge-storing device [via 350]; and, connecting the output of the DC-to-DC converter to the memory device [via 323].

Chang et al. discloses all of the above mentioned but is silent about the fact that the memory is used as a non-volatile application. However, this claimed limitation is not new. Chen et al. disclose the MEMs can be used for nonvolatile application [see abstract and columns 1-3]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Chang et al. MEMS memory circuit element to include the MEMS element as taught by Chen et al., since the modification is merely a substitution of a functionally recognized equivalent element. Further, the MEMs elements of Chen et al. not only improve the performance of the device, but also a necessity for the functionality of the device.

#### ***Allowable Subject Matter***

6. Claims 1-8, 10 and 17-20 are allowable over the prior art of record.

7. The following is an Examiner's statement of reasons for the indication of allowable subject matter: the prior art of records does not show (in addition to the other elements in the claim) the following:

- Inductor connected in parallel with the DC-to-DC converter.

- A diode at the input of the charge-storing device connected such that the flow of electric current from the charge-storing device to the power supply is prevented.
- Determining whether a control signal sent to the non-volatile memory device is a reset signal; and delaying the control signal if the control signal is a reset signal for time sufficient for the non-volatile memory device to complete a memory write cycle.
- A dc-to-dc converter connected at its input to the charge-storing device and the power supply and connected at its output to the non-volatile memory device such that upon interruption of the power supply, the charge-storing device provides sufficient input voltage to the dc-to-dc converter to provide rated output to the non-volatile memory device for a time sufficient for the non-volatile memory device to complete a write cycle.
- Transferring the stored electrical charge upon interruption of the power supply to the input of a dc-to-dc converter at a potential sufficient to operate the dc-to-dc converter; and supplying regulated dc power from the output of the dc-to-dc converter to the non-volatile memory device for a time sufficient for the non-volatile memory device to complete a full write cycle.

***Remarks***

8. Applicant's arguments filed November 28, 2006 have been fully considered but they are not persuasive.

Applicant argued that the references [us patent # 6,514,781 and us patent #6,473,361] do not disclose the claimed connections. However, the Examiner directs Applicant's attention toward figure 3 of the us patent #6,514,781 ['781]. In the reference '781, Chang et al. clearly shows the connections as claimed, for example, the input [vclamp or Vcc connection could also be interpreted as that connection] of a dc-to-dc converter to the charge-storing device [via 350]; and, connecting the output [coupled to i/o] of the dc-to-dc converter to the memory device [via 323].

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***


9. When responding to the Office action, Applicants are advised to provide the Examiner with line and page numbers of the application and/or references cited to assist the Examiner in the prosecution of this case.

Art Unit: 2827

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Michael T. Tran whose telephone number is (571) 272-1795. The Examiner can normally be reached on Monday-Thursday from 7:30-6:00 P.M.

11. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-

1950.



Michael Tran  
Art Unit 2827  
January 30, 2007

**MICHAEL TRAN**  
**PRIMARY EXAMINER**